

~~February 29, 2016~~ March 14, 2016

Dear Interested Party:

EXPRESSION OF INTEREST (EOI) FOR CROSS-FLOW FILTRATION MODULE, CESIUM ION EXCHANGE MODULE, VALVE MODULES, ELECTRICAL EQUIPMENT, CONTROLS, AND ASSOCIATED EQUIPMENT

The purpose of this expression of interest (EOI) is to identify potential firms interested in designing, fabricating, and testing a filtration module and cesium ion exchange modules capable of removing solids and cesium from Hanford supernatant tank waste. The initial scope will be limited to design, fabrication and factory acceptance testing of the filtration and cesium ion exchange process modules. The scope may be expanded to include other equipment such as valve modules, electrical equipment, controls, and integrated factory acceptance testing options once the scope of work for those options is defined.

Background

Washington River Protection Solutions (WRPS) is the Tank Operating Contractor (TOC) for the U.S. Department of Energy-Office of River Protection (DOE-ORP) on the Hanford Site. The Hanford Site stores an estimated 56 million gallons of mixed radioactive and chemically hazardous waste in large underground tanks. Washington River Protection Solutions is in the process of designing a Low-Activity Waste Pretreatment System (LAWPS) to produce Low Activity Waste (LAW) from Hanford tank waste. The LAW will be transferred to the Waste Treatment and Immobilization Plant (WTP) LAW Vitrification Facility, where the hazardous constituents in the LAW will be immobilized in a durable glass waste form for disposal.

Technology Need

The key process operations for treating the waste include solids filtration and cesium removal. The technologies selected include filtration using cross flow filters (CFF), and cesium ion exchange (IX) using elutable spherical resorcinol formaldehyde (sRF) resin.

Current Approach

The CFF module incorporates two CFFs capable of producing filtrate at a nominal flow rate of 12 gpm, with the capability of flows ranging between 4 to 17 gpm. The CFF module consists of a filter feed tank, recirculation pump, piping spools, two CFF, valves, instruments and support framework as depicted in red in Figure 1.

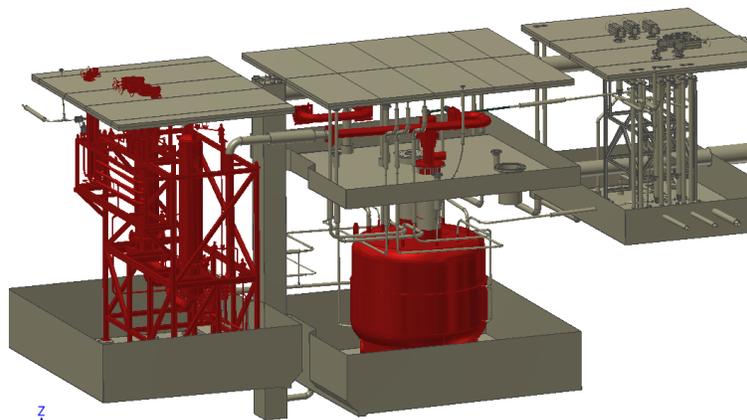


Figure 1. Cross Flow Filter Module

Filtrate from the CFFs moves through ion exchange. The IX modules would incorporate two IX columns in a lead-lag configuration capable of removing cesium using elutable sRF resin. The IX column modules generally include two IX columns, valves, and instruments as depicted in red in Figure 2.

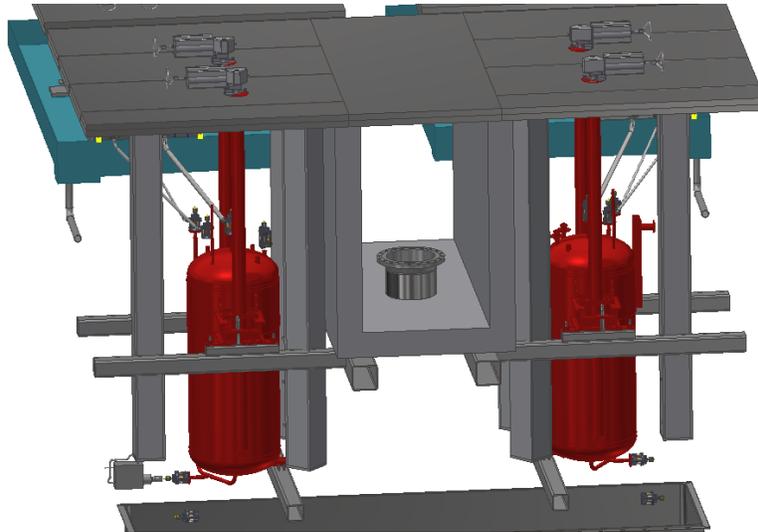


Figure 2. Ion Exchange Column Modules.

Several other associated modules containing valves, tanks, instruments, control panels, and other equipment closely involved with the LAWPS core functions of solids filtration and cesium removal may also be included as contract options.

Vendor Responses

WRPS is currently requesting that interested firms provide information regarding their capabilities. Responses should discuss the following:

- Location of facilities
- Office space for engineering and administrative staff
- Engineering capabilities including typical engineering staff size, engineering disciplines, registered professional engineers.
- Manufacturing space including key manufacturing equipment
- Manufacturing capabilities (piping, vessels, electrical, instrumentation, and control panels, etc.)
- Description of equipment testing capabilities and facility space available for testing.
- Description of facility features including building access, floor space, height, available building cranes, material handling equipment, environmental controls, electrical service, water, lighting, etc.
- Personnel qualifications and certifications for special process procedures and inspections such as nondestructive examinations, weld inspections, etc.
- Code work capabilities such as those under ASME B&PV, UL508A, etc.
- Identification of typical subcontracted engineering and manufacturing services
- Description of NQA-1 quality assurance program.
- Description of similar and relevant work and industry/customer serviced
- Key material handling equipment such as overhead cranes

Please send all correspondence regarding this EOI to Ricky Franzen @ Ricky_L_Franzen@rl.gov . Please use **2BD00-RLF-16-004** in the e-mail subject line. Ricky may be reached by telephone at (509) 373-7141. Responses are due by ~~March 14, 2016~~ March 16, 2016. **Response to this EOI is required to be considered in forthcoming procurements related to this EOI.**

Closing Remarks

Please be aware WRPS does not intend to award a contract on the basis of this notification, nor pay for information solicited. Vendors are encouraged to share industry knowledge and experience; however the sharing of proprietary knowledge is prohibited.

We look forward to hearing from you regarding our request and seeing you in the near future.

Sincerely,

Ricky Franzen, Contract Specialist

Procurement

cc: file